AI Strategic Adoption Framework

Governments can use this tool to identify strategic opportunities for Al adoption, helping them to achieve their political objectives and deliver economic and social benefits to their citizens. This tool is structured as a model framework, with hypothetical examples of government objectives that can be adapted to country-specific contexts. A set of guiding questions is given for three different approaches (country level, sector specific and existing government-programme integration) to help governments identify strategic opportunities for Al adoption, followed by a cost-benefit analysis of each.

The key challenge addressed by this tool is to help policymakers identify impactful projects for early-stage Al adoption. It is best used in conjunction with the Al Readiness Scorecard and Al Systems Map, which are designed to give an understanding of existing Al drivers in a country and the related ecosystem. This tool is not intended for use as a replacement for other important initiatives, such as appropriate regulatory schemes for data protection.

NOTES ON THE FRAMEWORK

- Using a strategic adoption framework will provide governments with clear objectives and enable
 them to expand AI policy opportunities beyond those that currently exist. The three approaches
 identified within this framework have wins and drawbacks, which must be carefully evaluated against
 a government's long-, medium- and short-term objectives.
- 2. While adoption of the three approaches identified here need not be mutually exclusive, there are feedback loops, risks and opportunities that exist along the duration of a particular approach, and these should be taken into consideration.
- 3. For countries seeking immediate ways (quick wins) to drive adoption across government and industry, integrating AI into an existing high-level government programme is a solid first step. This approach allows for the identification and testing of fast and viable adoption options as well as industry growth.
- 4. Applicable to most countries in Africa, we have identified the following three key approaches to driving AI adoption, as well as the core advantages and disadvantages associated with each one. Once countries have conducted a clear assessment of their existing AI ecosystem through the scorecard and systems map, they can then use this tool to strategise for effective and responsible adoption of AI.

Digital ID, AI/ML for Provide student and educational aid disbursement and resource resources Promote fintech and allocation Neglected areas other sector-specific (rural hubs, Al uses (Al for fraud Digital government female-led) detection) services Digitise paper based processes targeting broader groups Measurement, Google Al lab: assessment private hubs (Impact Hub, and analysis of GOAL1 GOAL 3 Digitalise processes existing processes Kumasi etc) **Build** innovation and infrastructure Leverage hubs existing hubs to support work APPROACH ONE **COUNTRY-LEVEL** AI/BIG DATA GOAL 2 Supporting policy to promote data/Al use Data-privacy Create a data Topic-specific, open regulations architecture data set development Infrastructure to promote data/Al use oftware Algorithmic-transparency Procurement of Supporting domestic Provide national regulations new technology computing resources companies and startups

APPROACH ONE: WHOLE-OF-ECONOMY TRANSFORMATION/COUNTRY LEVEL

Primary goal

Broad development and adoption of AI through nationwide initiatives, such as a national AI strategy. The focus is largely on long-term development and growth of AI across sectors.

Key guiding questions

Is there capacity to mobilise the nation around a big vision?

Country-level initiatives require broad political buy-in and long-term investment. Without this support and resources, initiatives run the risk of stalling before becoming effective.

Does the country already have a stated Al strategy or guidelines for digitalisation?

All adoption already exists within a broader national digitalisation ecosystem and therefore existing programmes and strategies must be taken into consideration.

What resources are needed to support Al adoption?

Consistent internet service and adequate computing power are some of the resources that underpin Al adoption. Without them, efforts to adopt Al run the risk of failing to get off the ground.

Grants/funding resources for capacity building (drones, computers) Invest in interdisciplinary research (applying existing Al tools to agriculture) Provide AI educational resources Industry panels (Al for farming demos, and working groups trial programmes) Educate users on trade-offs Find new ways of Al/other tools of working Identify and Establish a sector address key Provide spaces Identify success stories and methods specific competitive Provide educational limiting issues for cross-sector advantage through resources discussions innovation **APPROACH TWO** Develop best GOAL1 practices ' **SECTOR-SPECIFIC** Increase sector AI ADOPTION capacity and overall output Increase per person output Develop robotics Increase sector Provide procurement and automation tools efficiency and resources for Al tools (drones for crop resilience Develop needed spraying/assessment) infrastructure Solve issues impeding efficiency Predict potential issues **Build** essential resources Research on (internet service. process optimisation 5G, computing access) Develop predictive AI tools Curate sector-specific data sets (weather/drought prediction, (locally relevant weather, crop health) crops, language data sets)

APPROACH TWO: SECTOR-SPECIFIC AI INITIATIVES

Primary goal

Use AI to drive growth within a sector of interest. Countries should work closely with sector leaders and AI developers to promote tools to increase efficiency and output.

Key guiding questions

Does the country have a competitive advantage or opportunity in the specified sector?

Starting with sectors of high importance for a country can help make such initiatives a clear priority.

Are there clear AI and machine-learning capabilities that align with sector-specific goals?

Not all sectors will be instantly suitable for transformation by AI tools. Identifying where existing AI technology can be leveraged to support a sector is an important first step in transformation.

Does the country and sector have the capacity and tools to support adoption of Al?

Data-poor sectors may need other technologies or tools to enable eventual AI adoption. Sectors with low digitalisation are likely to require additional supporting efforts to make AI adoption a reality.

Marketability ML for targeting ML for demand forecasting Provide affordable of beneficiaries and drought prediction plans for farmers Project targeting Food deficits GOAL1 Internet and increasing Increase access exports productivity GOAL 3 Improve quality/ ML for identifying Address weak enhancing market opportunity technologies market linkages bandwidth APPROACH THREE **IDENTIFY AN EXISTING** AND HIGH-LEVEL Strong linkages **GOVERNMENT** Hardware **PROGRAMME** GOAL 2 Address use of low-Provide tools to quality seeds and fertilisers support farmers ML for mapping out (drones and computers optimal routes to run software tools) Education (Ghana post on Google Maps) Content in relevant languages Digital-distribution platforms Partnerships or funding Natural-language processing for local language-translation services **Partnerships** of existing startups/businesses (Farmerline, Esoko) with telcos

APPROACH THREE: AI INTEGRATION INTO AN EXISTING GOVERNMENT PROGRAMME

Primary goal

Demonstrate value of AI through integration into an existing government programme. This allows for small-scale testing and evaluation of AI in context to iterate more quickly.

Key guiding questions

What AI capabilities is the country trying to develop?

Robotics for manufacturing or natural-language processing, for example, require different areas of expertise. Understanding the AI capabilities that a country is aiming for can inform which programme would be a good fit.

Where do Al capabilities align with stated government goals?

High-level government goals should drive how and where Al is adopted. Al should be developed and deployed in ways that support such objectives to ensure maximum value.

What existing government programmes could benefit from the trial adoption of AI tools?

Comparing the strengths of available AI applications for government programmes should help to identify where they could best be incorporated in support of existing efforts.